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Differences in the diagnosis and treatment of immigrant and local psychiatric inpatients admitted to a general hospital in Spain: a controlled study

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Aim. This study has aimed to assess whether there are differences between immigrant and local psychiatric inpatients admitted to a general hospital in Spain in relation to diagnostic or treatment management.

Methods. We carried out a cohort study, with a sample of N=102 immigrant patients and N=102 local patients, matched by gender, age and diagnosis, admitted to the psychiatric ward of Hospital Universitario Miguel Servet, Zaragoza, Spain.

Results. Mean hospital stay was significantly shorter for immigrants (8.1 days) compared to local population (12.6 days). Use of security services (Odds ratio, OR= 5.13) and mechanical restraint (OR= 2.68) was greater for immigrants. Regression analyses for these three variables confirm that maximum explained variance is due to the "time in Spain" variable. After a period of 3 years in Spain, immigrants tended to receive diagnosis and treatment differing little from that offered to locals. Immigrants are offered fewer complex complementary tests such as EEG, CT scan or MRI. With regard to treatment, immigrants are administered more depot neuroleptics (OR= 4.7), but less clozapine or electroconvulsive therapy.

Discussion. These data seem to confirm that there is racial bias in health care professionals, similar to that found in other countries. Data are discussed in the light of related bibliography.

Key words:
immigration, psychiatric disorders, psychiatric admission, treatment, diagnosis.

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Diferencias en el manejo diagnóstico y terapeútico de los pacientes psiquiatricos hospitalizados inmigrantes y españoles: un estudio controlado

Objetivo. El objetivo de este estudio es evaluar si, en España, existen diferencias entre pacientes psiquiátricos inmigrantes y nacionales ingresados en un hospital general, en relación a su manejo diagnóstico o terapéutico.

Material y métodos. Estudio de cohortes, con una muestra de N=102 pacientes inmigrantes y N=102 españoles, ingresados en la planta de psiquiatría del Hospital Universitario Miguel Servet de Zaragoza, y apareados por sexo, edad y diagnóstico.

Resultados. La estancia media hospitalaria es significativamente más baja en inmigrantes (8,1 días) que en nacionales (12,6). Existe una mayor utilización de los servicios de seguridad (OR= 5,13) y de sujeción mecánica (OR= 2,68) en inmigrantes. Para estas tres variables, los análisis de regresión demuestran que el factor que más varianza explica es el tiempo de estancia del inmigrante en España. A los 3 años de estancia se equiparan las diferencias en estas tres variables entre inmigrantes y nacionales. A los inmigrantes se les solicita significativamente menos pruebas complementarias complejas como EEG o TAC/RNM. En cuanto al tratamiento, los inmigrantes reciben significativamente mas neurolépticos depot (OR= 4,7), pero menos clozapina o terapia electroconvulsiva.

Discusión. Estos datos parecen confirmar la existencia de un sesgo racial discriminativo de los profesionales sanitarios, similar al encontrado en otros países. Se discuten los hallazgos en base a la bibliografía previa.

Palabras clave:
Emigración, trastornos psiquiátricos, hospitalización psiquiátrica, tratamiento, diagnóstico.

INTRODUCTION

In the year 2007, those born outside of Spain already accounted for 12% of the total population[1]. In spite of this, the mental health problem of immigrants in our country has hardly been of interest[2]. This phenomenon not only occurs in Spain, since in countries within extensive migratory tradition such as the United States, only 5% of the articles on psychiatry focus on ethnic minorities[3]. Recent reviews of the literature have reached the conclusion that immigration *per se* does not cause an increased risk of suffering mental diseases, but rather this depends on the traumatic experiences suffered during the migratory process[4]. Regarding the moment when the psychopathology appears, it is accepted that stress increases in the immigrant during the first two years and that it subsequently decreases after that, until reaching normal levels[5].

Most of the studies in immigrant patients show that the use of health care resources is lower than in the autoctonic population and that they are treated in a different way[6]. In Spain, where the health care system is universal, financial condition is not an obstacle to access the system. Most of the times, the reason for the limited use of resources is that they are afraid that their illegal condition may be discovered, linguistic and cultural barriers and the significant geographic mobility of the immigrants due to work precariousness[7]. Studies exist that show that the treatment received by the immigrants within the health care system may be different and discriminatory[8]. One of the factors that could explain this fact are the prejudices of the health care professionals towards immigrants. Because the migratory phenomenon is recent in our country, there are no specific studies on this subject. The purpose of this study is to evaluate if there are differences in Spain between the psychiatric patients admitted to a general hospital in relationship to sociodemographic and clinical characteristics or to their therapeutic management by the professionals.

MATERIAL AND METHODS

- Design: Cohort study[9], in which immigrant patients admitted to psychiatry are compared with the Spanish patients.
- Setting: The study was conducted in the Psychiatry Department of the Hospital Universitario Miguel Servet (HUMS) of Zaragoza. This is a tertiary hospital with 1345 beds, of reference in Aragon, that attends to a population of 530,510 inhabitants.
- Sample size: A sample size of N= 100 patients has been calculated in each group based on[9] alpha: 5%, beta: 80%, two-tails (we do not suppose any difference in any sense), prevalence in some principal variables (mechanical restraints, use of security services, etc.): 20%; differences that were considered clinically significant: >20%. Patients were enrolled from January 2004 to June 2006.
- Inclusion and exclusion criteria: the following were used as inclusion criteria for the immigrant cohort:
  1. Patients admitted to the Psychiatric Department of HUMS (stay of at least 4 hours in the ward).
  2. Age: 18+ years.
  3. Born in a country other than Spain and having non-Spanish parents.

  The following were used as exclusion criteria:
  1. Patients admitted to the Psychiatric Department of HUMS for less than 4 hours (not considered as a hospital stay).
  2. Age: <18 years.
  3. Born in Spain.

  For the national cohort of patients, the inclusion criteria were:
  1. Patients admitted to the Psychiatric Department of HUMS (stay of at least 4 hours in the ward).
  2. Age: 18+ years.
  3. Born in Spain.

  European white ethnic group. Exclusion criteria were:
  1. Patients admitted to the Psychiatric Department of HUMS for less than 4 hours (not considered a hospital stay).
  2. Age:<18 years.
  3. Gypsy ethnic group, due to their special characteristics[10].
- Matching of the sample: Once a case was selected, a control was randomly chosen from among the Spanish patients who, having been admitted to the department during the same year, were of the same gender and age (with a margin of error of 3 years) and with the same principal diagnosis in the discharge report.
- Classification by ethnic groups: A classification developed by our team was used[11, 12]. This grouped the immigrants into 6 types: Latin Americans, Maghreban, Subsaharans, Eastern European, Asiatics and others.
- Instruments used: An instrument that included the following variables was used:
  a) Administrative data: name and last names, clinical history number, health care card (pensioner or not), duration of admission, origin and referral of the patient on discharge.
  b) Sociodemographic data: age, gender, civil status, economic status, profession, years of education, social network.
  c) Clinical data: reason for admission, main symptoms, associated medical diseases, medical and psychiatric backgrounds.
  d) Diagnostic data: request for complementary tests (X-ray, CT scan, MRI, EEG, etc.) and in-hospital consultation sheets to social workers or medical surgical services.
  e) Therapeutic data: type of drug, dose, administration pathways, other treatments (ECT, etc.).
- Statistical analyses. The normal distribution of the

Table 1 Sociodemographic characteristics of both samples

Variable	Inmigrants	Nationals	Significance
Civil status			
Single	50 (56.7%)	67 (60.3%)	
Married	21 (19.9%)	20 (21.1%)	NS
Level of studies			χ^2
Illiterate	5 (4.9%)	1 (0.9%)	
Basic education	59 (57.8%)	52 (50.9%)	
Upper education	31 (30.3%)	39 (38.2%)	
University	7 (6.8%)	10 (9.8%)	NS
Family structure			
Lives alone	20 (19.6%)	30 (29.24%)	OR=1.7 (CI 95%: 1.3-2.1)
Extended family	51 (50%)	21 (20.5%)	OR=3.8 (CI 95%: 3.0-4.6)
Family Psych. Backg.	22 (21.4%)	25 (24.4%)	NS
Personal Psych. Backg.	69 (67.7%)	84 (82.4%)	χ^2=10.1 Df=3 p<0.05
Alcohol consumption Backg.	66 (64.7%)	74 (72.5%)	NS
Toxic consumption Backg.	31 (30.3%)	27 (26.4%)	NS
Homeless	20 (19.6%)	2 (1.9%)	OR=12.1 (CI 95%: 10.8-13.2)

Chi square statistics has been used. In the variables in which there are significant differences, the Odds-ratio was calculated (OR).
Df: degrees of freedom. NS: non-significant

Table 2 Characteristics of the admission in the two samples

Variable	Inmigrant	National	Difference
Origin referral for admission			χ^2=20.2 Df=4 p<0.001
Family physician	5 (4.9%)	8 (7.8%)	
Mental health unit	15 (14.7%)	32 (31.3%)	
Emergencies	54 (52.9%)	38 (37.2%)	
Court/Prision	13 (12.7%)	1 (0.9%)	OR=13.2 (CI 95%=4.3-18.2)
Readmitted patients	24 (23.5%)	53 (51.9%)	χ^2=29.6 Df=1 p<0.001
Mechanical restraint	83 (81.3%)	32 (31.3%)	OR=2.6 (CI 95%:1.9-3.0)
Security intervention	31 (30.3%)	8 (7.8%)	OR=5.1 (CI 95%:3.8-5.9)
Voluntary discharge	10 (9.8%)	3 (2.9%)	OR=3.5 (CI 95%:2.7-4.1)
Duration admission (days)*	8.1 (DE=6.4)	12.6 (DE=10.3)	t=3.6 Df=202 p<0.01
Destination on hospital discharge			χ^2=33.9 Df=3 p<0.01
To no other site	24 (23.5%)	1 (0.9%)	OR=31.0 (CI 95%:28.2-34.4)
Family doctor	12 (11.7%)	5 (4.9%)	
Mental health	62 (60.7%)	80 (78.4%)	
Middle stay	4 (3.9%)	16 (15.6%)	

Chi square statistics has been used for all the analysis and the odds-ratio if there were significant differences (OR), except Student t* for paired samples in continuous variables.
SD: standard deviation. Df: degrees of freedom. NS: non-significant

variables was analyzed with the Kolmogorov-Smirnov test. The Student's t test for related samples was used to verify if there were differences between both cohorts in continuous variables (since they had been adjusted by gender, age and diagnoses). For qualitative variables, the Chi-square test was used. To calculate the differences in means between the different groups, the One-Way Analysis of Variance was calculated. For risk, we calculated the odds-ratio with the 95% confidence interval. As inferential statistics, analysis of logistic regression was performed when the dependent variable was dichotomic (model of "introduction of successive variables") or linear when the dependent variable was quantitative ("stepwise" model). To calculate the moment in which the treatment administered to the immigrants was balanced according to time of stay in Spain, the Chow Test was used[13].

- Ethical aspects: The study was approved by the Ethics Committee of Aragón.

RESULTS

Descriptive statistics

Both samples were made up of 50 women (49%) and 52 men (51%), with a mean age of 32.6 years (standard deviation: 11.2 years) in the simple of immigrants and 33.1 years (standard deviation: 11.1 years in that of the nationals. Regarding diagnosis, there was a predominance of schizophrenia, schizotypal disorder and delusional ideas disorder in both groups (ICD-10, F20-29) with 49%, followed by mood disorders (F30-39) with 18.6% and mental disorders and behavior disorders due to psychotropic substance consumption (F10-19) with 16.6 %. The statistics were not calculated between the two samples in regards to gender, age and diagnosis because the national-formed group had not been adjusted regarding that of the immigrants in these variables, as has already been described. Regarding distribution by ethnic groups, the most numerous was that of the Latin Americans (39.2% of the sample), followed by the Subsaharians (21.5%), and the Maghrebian and Eastern Europeans (both with 19.6%). The hospitalized patients belonging to the group of the European Countries of fifteen were not included as they were not considered immigrants at the time of the study. In relationship to the stay duration, 43.1% had less than 3 years, 13.7% from 3 to 5 years, 13.7% from 6 to 10 years, 12.7% from 10 to 15 years, 6.8% from 16 to 20 years and 9.8% more than 20 years. In regards to the legality status, 45% were illegals.

Table 1 shows the principal sociodemographic variables of both samples. Table 2 summarizes the admission characteristics. The mean hospital stay per ethnic groups obtained is 9.1 (SD: 1.3) days in the Latin Americans, followed by 8.7 (SD: 1.1) days in the Eastern Europeans, 7.5 days (SD: 0.9) in the Subsaharians, their stay being less than that of the Maghrebins (6.5 days; SD: 0.7), with statistically significant differences ($F=3.28$; $df= 3$; $p<0.5$). Table 3 summaries the use of health care services in both samples. Table 4 shows the clinical characteristics of the patients and Table 5, the treatment used in both groups.

Inferential statistics

A linear regression analysis was conducted to analyze the variables that explained the duration of a hospital stay. Only the variable "time of stay in Spain" was significant ($B=0.021$; $t=4.28$; $p<0.01$), that is, the greater the stay in Spain, the greater the hospital admission duration. A logistic regression analysis was also made for the variable "restraints" ($Wald=4.99$; $df=1$; $p<0.05$; $Exp(B)=0.26$) and for the variable "security measures usage" ($Wald=4.82$; $df=1$; $p<0.05$; $Exp(B)=0.57$). For both, the only significant variable was also "time of stay in Spain." In this way, the greater the stay in Spain, the lower the frequency of restraint/use of security measures. With the Chow test ($Chow=0.281$; $F(0.025,n2, (n1-k)= 1.417$; $F(0.975,n2,(n1-k)=0.605$), it was confirmed that when individuals had been living in Spain for 3 years, the values became balanced with those of the national subjects.

DISCUSSION

The main strong points of this work are: a) It is the first study conducted in our country on the management of hospitalized immigrants psychiatric patients. b) It is a controlled study, and c) The sample size is significant. On the contrary, the principal weak points of the study are: a) It is not a multicenter study, since it only includes the clinical practice of one hospital and it cannot be extrapolated to other health care sites. b) Because of the small sample size of each ethnic group, all of the immigrants have been unified to compare them against the non-immigrants, even though there are important differences between them.

Characteristics of the sample

The greatest percentage of admissions corresponds to Hispanic patients (39.2%), something that is to be expected since this is the most numerous group in our area of reference (44% of the total). In countries such as the United States, there is under-representation of this ethnic group in the health care services, because language acts as a barrier to access and health care is not free[14]. In Spain, this does not occur because of the similarity of languages and culture, that would facilitate adaptation to the country, and because the health care system is free. On the contrary, in our sample, there is an under-representation of patients from Eastern Europe (11.7% of the total of admissions versus 17.8% of

Table 3 Use of health care services in both samples

Variable	Inmigrants	Nationals	Significance
Medical emergencies (mean & SD)*	4.9 (7.4%)	7.2 (8.4%)	t=2.0 Df=202 p<0.05
Psychiatric emergencies (mean & SD)*	1.5 (1.7%)	1.9 (2.7%)	NS
Toxic request in urine	39 (38.2%)	20 (19.6%)	OR=2.5 (CI 95%:2.1-2.9)
Toxics + in urine	9/39 (23%)	9/20 (45%)	χ^2=3.2 Df=1 p<0.05
Interconsult. other specialties	25 (24.4%)	38 (37.2%)	χ^2=7.8 Df=1 p<0.01
Interconsult. social work.	3 (2.9%)	19 (18.6%)	OR=7.5 (CI 95%:6.2-8.4)
Request for EEG	22 (21.5%)	42 (41.1%)	OR=2.5 (CI 95%:1.8-2.9)
Request for CT/MRI	16 (15.6%)	32 (31.3%)	OR=2.4 (CI 95%:1.9-2.8)

Chi square statistics has been used for all the analysis and the odds-ratio (OR) if there were significant differences, except Student t* for paired samples in continuous variables.
SD: standard deviation. Df: degrees of freedom. NS: non-significant

Table 4 ClinCIal characteristCIs of both samples

Variable	Inmigrants	Nationals	SignifClance
Reason for admission			
Behavior disorder	35 (32.3%)	20 (17.6%)	OR=2.1 (CI 95%:1.7-2.3)
Suicide	20 (19.6%)	39 (38.2%)	OR=2.5 (CI 95%:2.1-2.8)
Hallucinations			
Auditory	29 (28.4%)	36 (35.2%)	NS
Visual	1 (0.9%)	1 (0.9%)	NS
Visual and auditory	10 (9.8%)	1 (0.9%)	OR=10.9 (CI 95%:8.2-12.4)
Delussions			
Persecutory	42 (41.1%)	47 (46%)	NS
Guilt	2 (1.9%)	6 (5.8%)	NS
Mystic-religious	16 (15.6%)	5 (4.9%)	OR=3.6 (CI 95%:2.4-4.1)
Extrapyramidal symptoms	39 (38.2%)	38 (37.2%)	NS
Mortality	1 (0.9%)	0 (0%)	NS

Chi square statistics has been used. The odds-ratio was used in the variables with significant differences (OR). NS: non-significant

the immigrant population). Language limitations and lack of knowledge of the health care functioning would be possible causes, because this subgroup of patients is the most recent in the migratory process. This phenomenon is not as intense in the case of Maghreban patients (12.7% of admissions and 11.5% of immigrants) and Subsaharan Africa (11.4% admissions and 4.4% of immigrant population) in spite of the cultural difference, possibly due to the fact that these ethnic groups immigrated a longer time ago to our country and this population has more acculturated fellow countrymen who serve as a "cultural bridge." Finally, agreement is found in all the studies about the underrepresentation of Asiatic patients who maintain parallel health care systems that allow them to avoid contact with the Western health care systems[15]. In regards to gender of the immigrant patients, the distribution is 51% of the men versus 49% of women, which does not show significant differences with the distribution of gender of the immigrant population in Aragon which is 56.6% men versus 43.4% women[1]. In regards to mean age of admission, that of the immigrants is a mean of 32.6 years, which is significantly less than the mean age of admission of the Spanish population in the psychiatric

Table 5 Treatment regimes in both samples

Variable	Inmigrants	Nationals	Significance
Use of IM neuroleptics	56 (54.9%)	53 (51.9%)	NS
Use of deport neuroleptics	32 (31.3%)	9 (8.8%)	OR=4.7 (CI 95%:3.9-5.4)
Use of atypical neuroleptics	42 (41.1%)	47 (46%)	NS
Use of clozapine	1 (0.9%)	9 (8.8%)	OR=9.1 (CI 95%:5.3-13.6)
Use of lithium	4 (3.9%)	9 (8.8%)	NS
Use of methadone	1 (0.9%)	3 (2.9%)	NS
Dose of neuroleptics* (mean and SD)	1.79 (1.76%)	2.82 (2.69%)	t=3.13 Df=202 p<0.01
Administration of ECT	0 (0%)	8 (7.8%)	χ^2=8.4 Df=1 p<0.01

Chi square statistics has been used for all the analysis (and the odds-ratio if there were significant differences), except Student t* for paired samples in continuous variables.
SD: standard deviation. NS: non-significant. Df: degrees of freedom.

department of the Hospital Miguel Servet (44.3 years in the year 2006).

No differences were found between immigrants and nationals in regards to the civil status or level of studies between both groups, single subjects with completed basic education predominating in both of them, as in other studies performed in our country[7]. All of the works showed that the financial status of the immigrants is more precarious, as confirmed by the greater percentage of the "homeless." The situation of illegality is very frequent (44.3%) and higher than that found in other countries, probably because most of the patients have been in Spain for less than 3 years. The immigrants live alone in their home less frequently than the nationals, probably because of financial difficulties, above all in the first stages of the migratory process.

Clinical aspects

There our fewer personal psychiatric backgrounds in immigrants than in nationals, which may be due to the fact that the disease has been minimized or given other explanations due to cultural factors or that those who are capable of migrating successfully are healthier and stronger individuals[12]. In regards to the psychopathology, delusions with mystic-religious contents are more frequent. This may be explained by the elevated religiousness of the patients of most of the non-Western cultures[12]. Furthermore, differences have been found regarding hallucinations. The immigrants have visual and auditory associated hallucinations 10.9 times more frequently, in agreement with the greater richness of the hallucinatory experience in these patients[12].

Characteristics of the admission and use of resources

There is a greater proportion of immigrant patients who are admitted within the prison module, probably due to a racial bias that would consider immigrant patients as more dangerous[16]. In our sample, the proportion of involuntary admissions in national patients is greater than for immigrants. This finding was unexpected because previous studies showed that the immigrants had lower disease awareness due to cultural reasons[16]. In our study, the immigrant patients are discharged voluntarily more frequently and there is a greater proportion of immigrants who, on discharge, are not referred to any site for outpatient follow-up. Neither of these findings can be explained as in other countries[6] since by simply being within the censuses, the immigrants, although illegal, have access to the health care system[7]. On the contrary, these findings seem to be because the professionals perceive that the conditions of these patients are not as serious or simply because of a discriminatory ethnic bias that leads to the providing of a worse quality of treatment and subsequent follow-up. Although previous studies found that there were no differences in the percentage of subsequent readmissions in the subgroup of immigrant patients[12], in our sample. there was a greater number of hospital readmissions in the group of national patients compared with those of the immigrants. We consider that the cause in this case is also mobility due to reasons of work or financial conditions between the different cities in immigrants[7].

Greater use of mechanical restraints and of security services in immigrant patients has been confirmed in our

sample. This fact has also been described in other studies[17]. However, perhaps one of the most important data from our study is the significantly lower hospital stay of the immigrant patients (8.1 days) versus the nationals (12.6 days). This piece of information is also found in other studies, above all in the treatment of patients belonging to the black race both in the United States as well as Great Britain[12]. This finding could be explained by (12, 18): 1.- Difficulties to understand the psychopathology of these patients for cultural reasons since the pathoplasty is different. 2.- Discriminatory racial bias between the health care professionals, with which the hospital stay is shortened for contratransferential reasons. 3.- Difficulties to understand the clinical picture for idiomatic reasons. If we specifically calculate the means stay time among the different ethnic groups, we find that the subgroup of patients having the shortest means stay is that of the Maghrebian patients (6.9 days), followed by the Subsaharians (7.5 days as they mean) and the Eastern Europeans (8.4 days). The subgroup having the greatest means stay is that of the Latin American patients (8.8 days). Interestingly, these data have an exact correlation with the study on negative feelings of the Spanish doctors towards immigrant patients also performed in Zaragoza[19]. In it, the patients producing the greatest rejection were the Maghrebans, followed by the Subsaharians and Eastern Europeans, the Latin Americans being those who had the most positive stereotype. These would support the hypotheses of racial bias. When a regression analysis was performed to identify the variables that best explain both the time of hospital stay as well as the use of restraints and safety personnel, the variables that best explained all of them was the time of stay in Spain. When we want to compare by means of the Chow statistics that variables that have similar values to those of the nationals, we can verify that it is the variable of 3 years of stay in Spain. This piece of information coincides with many studies that confirm that the immigrants become integrated into the host country at about 2-3 years[20].

In our study, the mean visits to the emergency service due to psychiatric reasons and both groups do not show significant differences, while consultations to emergency service due to a medical-surgical reason are more frequent in the national subjects. These data contradict other previous studies, which state that immigrants come more often to the emergency service[17]. The explanation for this contradiction could be that the mobility in this population is very high in Spain, so that the number of emergencies may be lower due to artifacts in the emigrants. On the other hand, the number of intercultural consultations to social workers is lower in the immigrant group than in the national one, although their social economic precariousness is greater. The possible causes that could explain these results may be partially due to the lower mean stay of these patients as well as the greater number of voluntary discharges[12], which would result in less time during their hospital stay for evaluation by the social worker. In regards to the request for complementary tests, a lower number of complex complementary tests are requested for the immigrants, such as EEG, CT scan and MRI, and the same occurs with the administration of electroconvulsive therapy. The reason for these differences, in the case of the Spanish health care, is not due to lack of health care coverage as in other countries. In the case of Spain, it may be due to an ethnic discrimination bias, so that worse attention would be given to immigrant patients. Another alternative, but not excluding explanation, is that the number of complementary tests performed for the national patients goes beyond that which is needed in order to avoid subsequent demands, while this phenomenon is not as clear in the interaction with immigrants. We have also found that a greater number of toxic tests are requested in immigrant patients. Previous studies conducted in the United States have found that the percentage of first-generation immigrants who consume alcohol and other toxic elements is less than in the general population[14], although these differences decrease when second-generation Hispanics are studied. In spite of everything, there is a tendency to request a greater number of toxic tests in urine for immigrant during their hospital stay[21], a practice that would only be justified by a racial prejudices. In fact, in our sample, there were also no differences found in the results of the analyses of toxic elements in urine.

Biological treatment

There are many studies in which the immigrant patients, especially those of the black race, receive greater doses of neuroleptics, in any level of the health care system[22]. In our study, the doses of neuroleptics in immigrants are also higher than for the nationals (mean of 1.79 mg in immigrants versus 2.82 mg in 9 immigrants) for the adjusted dose of Risperidone[23]. Although in our study, there were no differences between both groups in regards to the use of atypical neuroleptics, differences were found in most of the studies conducted in the United States. However, in the United States, the insurance companies limit the prescriptions of atypical neuroleptics due to their high cost, an effect that does not occur in Spain[14]. In regards to the specific use of the atypical neuroleptic clozapine, as in previous studies performed in other countries, it was found that it is used significantly less in the group of immigrant patients than in that of the national ones. The possible causes that could explain this fact are, on the one hand, that it has been demonstrated that benign leukopenia exists in patients of black race[12]. This would possibly increase their risk of developing a side effect, which although uncommon, may be very dangerous, such as agranulocytosis. The other possible cause of this lower use of this drug is the need for weekly laboratory analysis controls for a period of 18 weeks which, sometimes due to the mobility of these patients, discourages the professionals from attempting to use them in immigrants.

CONCLUSION

In this first study conducted in Spain on the diagnostic and therapeutic management of hospitalized immigrant psychiatric patients versus Spanish ones, it has been verified that there are significant differences in the approach to both groups in relationship to important variables such as hospital stay, use of mechanical restrain or security services, request for complex complementary tests or dose and type of neuroleptics used in the treatment. We have analyzed the possible causes, based on previous bibliography, and everything seems to indicate that the discriminatory racial bias would be one of the principal hypotheses. As an encouraging message, we have found that the management of the immigrants becomes equal to that of the nationals towards 3 years of stay in Spain, a time in which the acculturation would have been successfully completed.

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